

GAATTCGGGTGGGTAGGTCGGGCAGGGTAGGACAGGCCTAAGAGAGAGGCCGGACAGACCTCC
TTTGGAAGCAGCCACTTCTGGTCCCCATCCCTGGAGCGATCGAGCGCAGGATCTGCTGTCCCAT
GGGACAGCAGATCTCTTCCCAGTGCACAGCTTCTCCTCTGCCTGTTTTCCCTGCTTCCAGTG
CTCCAGGTGGCCCAACCAGGCCAGGCACCCAGGACCAGCCCCTGTGGACACTTTTGGAGCAGT
ACTGCCACAGGACCACAATTGGGAATTTTTTCAGGTCCCTACACCTACTGCAACACGACCTTGGA
CCAGATCGGGACCTGCTGGCCACAGAGCGCACCCGGAGCCCTAGTAGAGAGACCGTGCCCCGAG
TACTTCAATGGCATCAAGTACAACACGACCCGGAATGCCTACAGAGAGTGCCTGGAGAACGGGA
CCTGGGCCCTCAAGGGTCAACTACTCACACTGCGAACCCATTTTGGATGACAAGCAGAGAAAGTA
TGACCTGCATTACCGAATCGCCCTCATTGTCAACTACCTGGGTCACTGTGTTTTCCGTGGTGGCC
CTGGTGGCCGCTTTCCTGCTTTTCCCTAGTGCTGCGGAGTATCCGCTGCCTGAGGAATGTGATCC
ACTGGAACCTCATCACCACCTTCATTCTGAGAAACATCGCGTGGTTCCTGCTGCAACTCATCGA
CCACGAAGTGCACGAGGGCAATGAGGTCTGGTGGCGCTGCATCACCACCATCTTCAACTATTTT
GTGGTCACCAACTTCTTCTGGATGTTTGTGGAGGGCTGCTACCTGCACACGGCCATTGTGATGA
CGTACTCCACAGAGCACCTGCGCAAGTGGCTTTTCCCTCTTCATTGGATGGTGCATTCCCTGCCC
TATCATCATCGCCTGGGCAGTTGGCAAACCTCTACTATGAGAATGAGCAGTGCTGGTTTGGCAAG
GAAGCTGGTGATTTGGTGGACTACATCTACCAGGGCCCCGTCATGCTTGTGCTGTTGATCAATT
TTGTATTTCTGTTTAACATCGTCAGGATCCTGATGACGAAGTTACGAGCATCCACCACGTCCGA
GACAATCCAATACAGGAAGGCAGTGAAGGCCACGCTGGTCCCTCCTCCCCCTGTTGGGCATCACC
TACATGCTCTTCTTTGTCAATCCTGGCGAGGACGACCTGTCCCAGATTGTGTTTCATCTACTTCA
ACTCTTTCCTGCAGTCCTTCCAGGGTTTCTTTGTGTCCGTTTTCTACTGCTTCTTCAATGGAGA
GGTGC GCGCGGCCCTGAGAAAGCGGTGGCACTCGGGGCAGGACCACCACGCCCTCCGGGTGCCT
GTGCGCCGGGCCATGTCCATCCCTACGTCGCCCACCAGGATCAGCTTCCACAGCATCAAGCAGA
CAGCTGCTGTGTGACCCTCTGTCAACCGTCTGCCCGGCAGTCCACCCTGAGGCAGCTTCTCCAT
CCTTTACAGCCTTCCCCCTGGGTCCCTCCTTGCTACCCTGACCCACAGGTACAAGGTACAGGAGAA
GGGAGGAGAACGAACACTCCC (SEQ ID NO:1)

FIGURE 1

= deleted in targeting construct

[] = sequence flanking Neo insert in targeting construct

GAATTCCGGGTGGGTAGGTTCGGGCAGGGTAGGACAGGCCTAAGAGAGAGGCCGGACAGAC
CTCCTTTTGAAGCAGCCACTTCTGGTCCCCATCCCTGGAGCGATCGAGCGCAGGATCTGC
TGTCCCATGGGACAGCAGATCTCTCTTCCCAGTGCACAGCTTCTCCTCTGCCTGTTTTCC
CTGCTTCCAGTGCTCCAGGTGGCCCAACCAGGCCAGGCACCCCAGGACCAGCCCCCTGTGG
ACACTTTTGGAGCAGTACTGCCACAGGACCACAATTGGGAATTTTTCAGGTCCCTACACC
TACTGCAACACGACCTTGGACCAGATCGGGACCTGCTGGCCACAGAGCGCACCCGGAGCC
CTAGTAGAGAGACCGTGCCCGAGTACTTCAATGGCATCAAGTACAACACGACCC [GGAA
TGCCTACAGAGAGTGCCTGGA] GAACGGGACCTGGGCCTCAAGGGTCAACTACTCAGACT
GCGAACCCATTTTGGATGACAAGCAGAGAAAGTATGACCTGCATTACCGAATCGCCCTCA
TTGTCAACTACCTGGGTCACTGTGTTTTCCGTGGTGGCCCTGGTG [GCCGCTTTCCTGCTT
TTCCTAGTGCTGCG] GAGTATCCGCTGCCTGAGGAATGTGATCCACTGGAACCTCATCAC
CACCTTCATTCTGAGAAACATCGCGTGGTTCCCTGCTGCAACTCATCGACCACGAAGTGCA
CGAGGGCAATGAGGTCTGGTGCCGCTGCATCACCACCATCTTCAACTATTTTGTGGTCAC
CAACTTCTTCTGGATGTTTGTGGAGGGCTGCTACCTGCACACGGCCATTGTGATGACGTA
CTCCACAGAGCACCTGCGCAAGTGGCTTTTCCCTCTTCATTGGATGGTGCATTCCCTGCCC
TATCATCATCGCCTGGGCAGTTGGCAAACCTCTACTATGAGAATGAGCAGTGCTGGTTTGG
CAAGGAAGCTGGTGATTTGGTGGACTACATCTACCAGGGCCCCGTCATGCTTGTGCTGTT
GATCAATTTTGTATTTCTGTTTAAACATCGTCAGGATCCTGATGACGAAGTTACGAGCATC
CACCACGTCCGAGACAATCCAATACAGGAAGGCAGTGAAGGCCACGCTGGTCTCTCTCCC
CCTGTTGGGCATCACCTACATGCTCTTCTTTGTCAATCCTGGCGAGGACGACCTGTCCCA
GATTGTGTTTCATCTACTTCAACTCTTTCCTGCAGTCCTTCCAGGGTTTCTTTGTGTCCGT
TTTCTACTGCTTCTTCAATGGAGAGGTGCGCGCGGCCCTGAGAAAGCGGTGGCACTCGGG
GCAGGACCACCACGCCCTCCGGGTGCCTGTGCGCCGGGCCATGTCCATCCCTACGTGCGC
CACCAGGATCAGCTTCCACAGCATCAAGCAGACAGCTGCTGTGTGACCCTCTGTACCCGT
CTGCCCCGCGAGTCCACCACTGAGGCAGCTTCTCCATCCTTTACAGCCTTCCCCCTGGGTCC
TCCTTGCTACCCCTGACCCACAGGTACAAGGTACAGGAGAAGGGAGGAGAACGAACACTCC
C

FIGURE 2A

Gene Sequence Structure *

441 bp

Sequence Deleted

582 bp

Size of full-length
cDNA: 1557 bp

Targeting Vector* (genomic sequence)

Construct Number: 3050

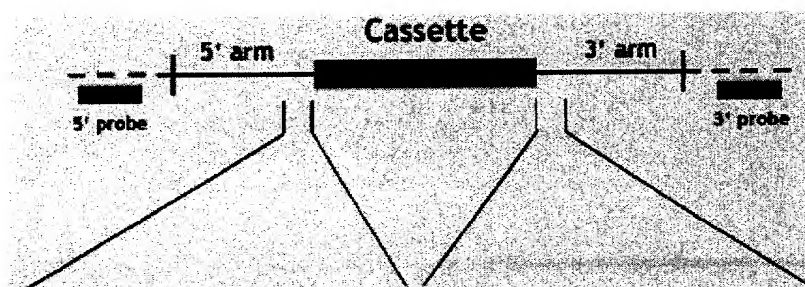
Arm Length:

5': 3.1 kb

3': 2.5 kb

LacZ-Neo

Cassette



————— Targeting Vector
- - - - - Endogenous Locus

* Not drawn to scale

5' > AGCCCTATGTGTAATTTTCAT
ATAAATGACTCATATTAGCTTTCA
GATATGCATTGTGTTTCAGGTCT
GGGAGAACTAAGGAGTGTGGACCT
TATCCTGCAGGTACTAGGGAGCCA
GGGAGGGCTTTTGAGGCGGGAGGG
CGTCCTGACTCTCAGTGGTTGGCA
TC'TTCTCTAGGGAATGCCTACAGA
GAGTGCCCTGGA<3'
(SEQ ID NO:2)

5' > GCCGCTTTCCTGCTTTTCCTA
GTGCTGCGGTGAGTCCACCTCCAC
CCTGCTTCCCTCCTTGTCTTTGCCT
CTCCCAGACATTGTCTCTTCCATT
CTGGGGCCCCGGGAACAGTAGCCA
GAAGTGGGTTTAAGTCAGACCCCC
AGGGCCATGACCACCAGCCTGCCT
GAAGGGTAGAGAGCAAGCCCAGCT
GGGACCACCAG<3'
(SEQ ID NO:3)

FIGURE 2B